

University of Cambridge

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# Changing Approaches to Disinfection in England, c.1848-1914.

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## Preface

### Declaration:

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration.

### Statement of Length:

This dissertation is 79,998 words in total, including Appendix, graphs and contents page but excluding footnotes, bibliography, abstract and acknowledgements.

## Abstract

This thesis examines the development of disinfection as a public health intervention in England between 1848 and 1914. Using a wide range of sources including printed medical and health texts, journals, the popular press, and material from five local case studies in Lancashire the thesis illustrates the tensions and complexities of the changing nature of the policy, and places these in the context of wider public health and social developments, and changing disease theory.

This thesis shows that disinfection was not the static concept assumed by some historians, but was a flexible category that underwent significant theoretical change throughout the nineteenth century. Older approaches which invoked explanations involving putrefaction, miasmas and other concepts were increasingly replaced with ideas about killing germs, in particular bacteria. This was paralleled by significant changes in how disinfectants were evaluated and their value assessed. Contemporaries hoped and assumed that this would lead to an improved, more “scientific” approach which was more effective than dubious public efforts. Disinfection relied on the help and co-operation of the general population in order to be effective, and methods were modified to take into account their concerns about damage to property and cost. Nevertheless public health professionals were suspicious of the ability of the public to undertake disinfection effectively, assuming that they were guided by sensationalist advertising, and used useless commercial preparations instead of effective germicides. Where they did use stronger substances, they were prone to accidentally or deliberately poisoning themselves with caustic and toxic disinfectants. Public disinfection was problematic no matter what approach they took. Legislation increasingly worked on the assumption that public disinfection was inadequate, removing control of disinfection from unskilled lay hands and placing authority and responsibility on local authorities and the Medical Officers of Health. This was thought to improve disinfection's efficacy and ensure a reliable approach to disease prevention.

This revolution did not, however, extend to advice or practice. It is clear that disinfection was in place before the development of germ theory, showing that the policy was not simply a result of germ based ideas. This thesis argues that the methods and approaches recommended in advice literature changed very little throughout the second half of the century, and disinfection retained a strong focus on environmental conditions into the twentieth century, undermining the assertion that public health moved to a more “exclusive” person centric approach from the 1880s onwards. This finding is further

emphasized by the local case studies, which show strong continuity of approach from the 1860s to 1914. The study of disinfection illustrates the limitations of the application of germ theory, and the continuation of environmental public health policies long after has been previously supposed. In this way, disinfection legislation which assumed that local authorities would provide an effective standard of disinfection did not take into account the mismatch between new laboratory-based research and the preoccupations of medical officers of health. The much-vaunted “new world” of germ-based disinfection did not work in the way contemporaries hoped.